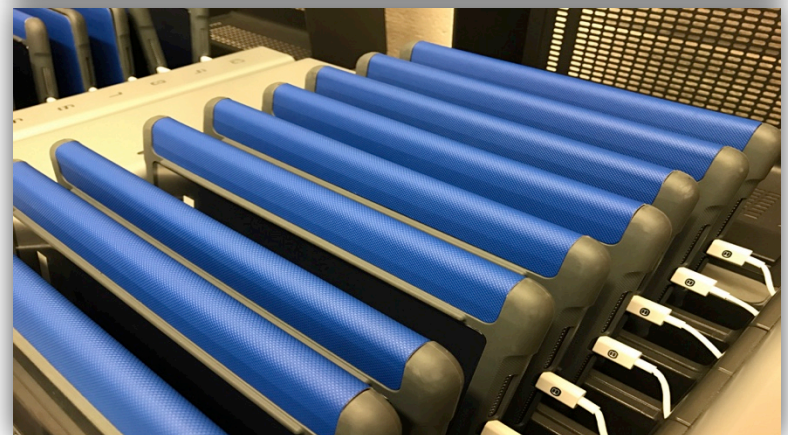
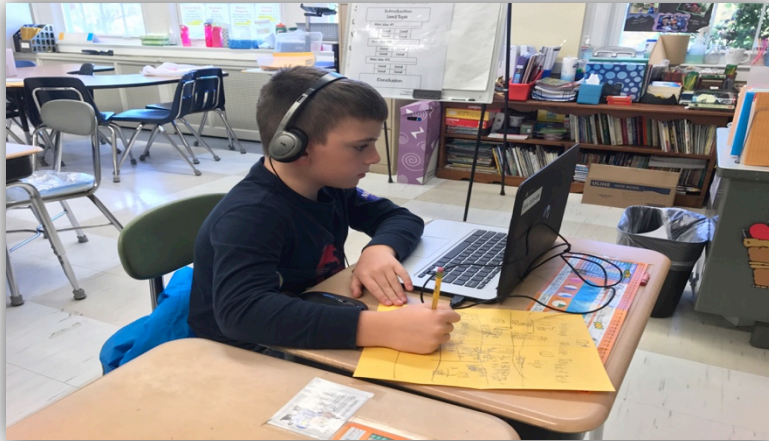


HANOVER PUBLIC SCHOOLS

Server Upgrade Project



November 16, 2017



Current State Summary

- In the schools we currently have 6 obsolete Windows servers, 8 obsolete Mac servers and 1 Ubuntu server
- The Windows servers perform a variety of functions yet their hardware is well below that necessary and the OS is end of life. The hardware is well out of support
- The Mac servers are woefully under configured and are a dead product from Apple with no support
- There are services we are unable to install and utilize due to the lack of server resources to run these.
- We have no good backup platform, currently using CrashPlan



Current State

Server04 – High School
Dell PowerEdge R610
Windows Server 2008
Installed June 2011

Milestone02 – High School
OEM Vendor Server
Windows Server 2008
Installed June 2011

HHS1 – High School
Mac Xserve 2009
MacOS 10.11.6
Installed June 2011

Salmond – Salmond School
Mac Pro 2009
MacOS 10.11.6
Installed June 2011

Server03 – High School
Dell PowerEdge R710
Windows Server 2008
Installed June 2011

Milestone01 – High School
OEM Vendor Server
Windows Server 2008
Installed June 2011

HHS2 – High School
Mac Pro 2009
MacOS 10.11.6
Installed June 2011

Server3 - Salmond
Dell desktop
Windows Server 2008
Installed ??

Server1 – High School
OEM Vendor Server
Windows Server 2008
Installed June 2011

WIDA – High School
Mac Mini 2011
Installed 2011ish

HHS3 – High School
Mac Pro 2009
MacOS 10.11.6
Installed June 2011

TechTribe – High School
Dell
Ubuntu
Installed ??

HMS– Middle School
Mac Pro 2009
MacOS 10.11.6
Installed June 2011

Center – Center School
Mac Pro 2009
MacOS 10.11.6
Installed June 2011

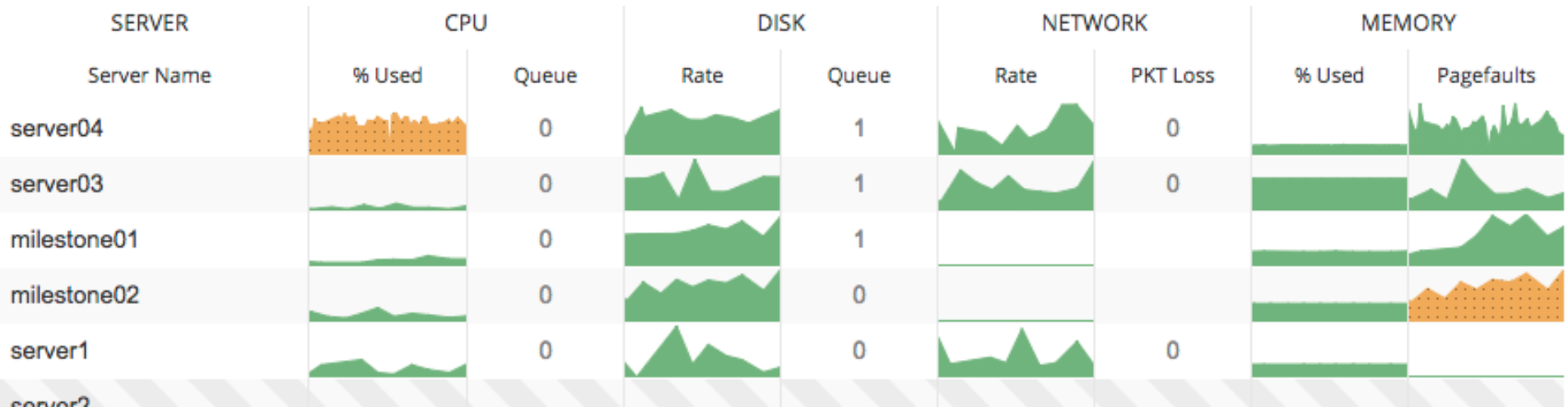
Cedar– Cedar School
Mac Pro 2009
MacOS 10.11.6
Installed June 2011

Sylvester– Sylvester School
Mac Pro 2009
MacOS 10.11.6
Installed June 2011

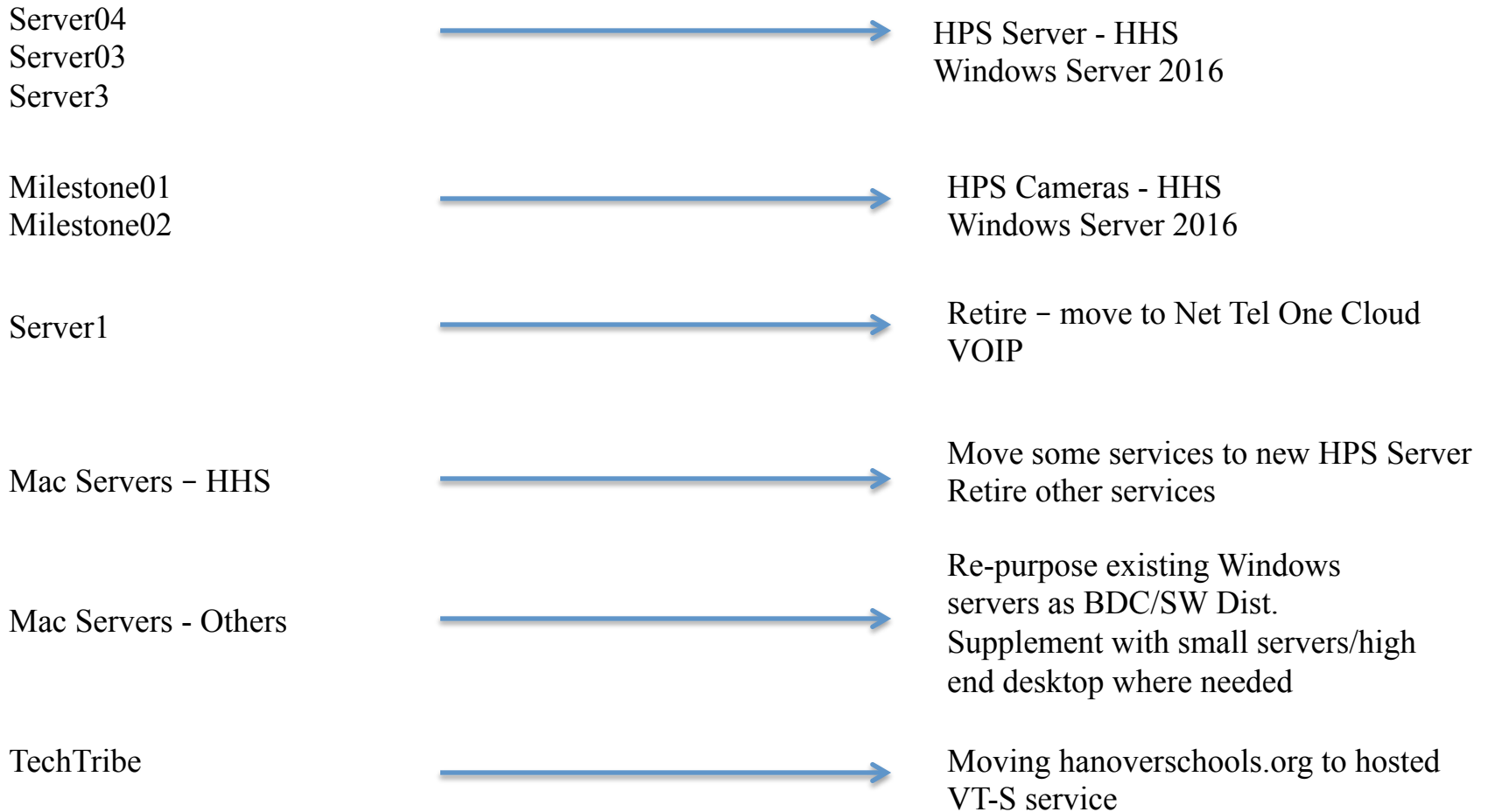


Server Monitor Snapshot

Nov 16, 2017 @ 9:30am



Proposed Future State



New Server Environment

High Level Design Summary

- Mostly Windows Server 2016, some Ubuntu and MacOS
- Hardware configured to be flexible and expandable (i.e. network attached storage)
- Primary hardware to be redundant
- Virtualized server instances
- Proper Backup services (primary backup with off-site redundancy, capable of 15 recovery time)



Summary of Proposals Received 2017

\$18k (CDI)

- Single Server capable of replacing Server04 only with new hardware, would be stretch to include enough Windows licenses under current MS license program

\$46K(Storage Networks)

- Single Server, virtual instances of our server instances,
- Fully redundant storage and head end (CPU/Memory/NICs)
- Network attached storage
- Included Windows software licenses (100 CAL, we will need more)
- Included VEEM backup with off-site recovery services
- Would replace Server04, Server03, Server2

\$65k (Whalley)

- Single Server, virtual instances of our servers
- Fully redundant head end (cpu/memory, NICs)
- No redundancy of network attached storage
- Did not include Windows software licenses
- Included VEEM backup
- Would replace Server04, Server03, Server2

\$154k (Simplivity)

- Hyper-converge Solution
- Fully redundant storage **and** head end (CPU/Memory/NICs)
- ZERO downtime from hardware failure
- Did not include Windows software licenses
- Would replace Server04, Server03, Server2, Milestone1, Milestone2, HHS Mac Servers



Discussion and Questions

